

# O U T P U T

## OUTPUT

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Goscoms Official Magazine

AUGUST 1987 VOL 3



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GOSCOM - OUTPUT - MAGAZINE  
GOSFORD COMMODORE COMPUTER USERS GROUP

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T.L.C.U.G. and Goscom survive purely from the efforts of all the committee members and the excellent support donated by The sponsors. Remember to check out our shoppe or our sponsors before buying anything for your computer. Make sure you mention that you are a GOSCOMian for the best deals around.

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The Club magazines (OUTPUT & RAM) are produced on C64, C16, C128, Amiga, PC 5 computers, Commodore 802, Commodore 803 printers and Commodore 1101 daisy-wheel printer, and a lot of person hours from many people. However, we must state that we are a non-profit Social Group, and that some of the cartoon, art work and program listings are borrowed (pirated) from other professionally produced periodicals. We would like to formally thank other magazine Editors and artists for the material that we re-use. We select art work and public domain listings to suit our own articles and format, and don't intentionally try to break copyright laws by blatantly reproducing any other magazine articles.

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## *THE PRESIDENT'S MESSAGE*

*Any resemblance to the fact is  
pure coincidence.*

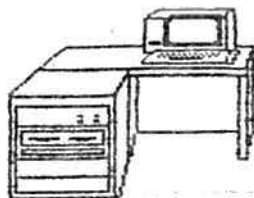


Last months' AGM marked the second year of Goscom's existence. Actually, it was two years and one month but who's counting. In that time, Goscom has played host to some new and exciting ideas and people. We have enjoyed the demonstrations by Commodore Australia, Ashton Scholastic, Pittwater Distributors, Telecom (Gosfords' TBO), The Printer Specialists, Professional Filing Systems and Computerscope Hornsby. Quite an impressive line-up by any standard. And when you consider that all but two of those organisations are from out of town that's no mean feat. On behalf of Goscom, I would like to thank those people who have contributed to the clubs' continuing success.

Through the hard work of the Committee the club enjoys a reputation the envy of most. We have strived for credibility with our business contacts by having a policy of non-piracy. This policy engenders much more co-operation from sponsors such as Computerscope Hornsby who endow us with software for reviews and raffling at our monthly meetings, knowing that their contribution will not be taken advantage of by illegal copying of their software. I have heard of some clubs with a much higher membership count but most of these clubs draw members simply for the pirating that goes on there. Goscom decided at the beginning that this was not the purpose of user groups, and information sharing was the prime reason for creating a user club. Therefore, we'll continue to pursue these aims into the future.

At the AGM, there were a few changes which came into being. Changes that will, I hope bring fresh ideas and views enabling the club to grow further and provide members with what they want. In line with this theme, the bi-monthly committee meeting usually held at Gosford Leagues Club on the 1st/3rd Wednesday of the month has been dropped and will from now on, precede the general meeting each third Wednesday of the month. We feel that this will serve to involve the general membership more in their club. We have seen this format work successfully at other clubs and find enough merit to at least give it a try. So in future, don't be afraid to have your say in what happens, after all, it is your club. Further to this, it has been agreed in principal to still have a second meeting and call it a workshop. A workshop to enable you to hack and learn how to best use your machines, or copy public domain software or even tutorials on anything you like to learn. We are open to suggestions. Again the venue will be NIAGARA PARK SCHOOL providing it can o.k the rooms. Something to note: Tuesday, not Wednesday will be the new night as some people say that Wednesday conflicts with Tech nights. More on that later.

Other changes include alterations to the fee structures. Subscriptions from June 1987, have been altered from \$20.00 per year to \$15.00. The initial joining fee of \$10.00 for the first year, has been done away with. Introduced, was a \$1.00 door fee for visitors. Visitors, receive a club magazine and are entitled to three (3) consecutive visits before having to join the club. Of course, members of Tuggerah Lakes Commodore User Group do not



# *the PRESIDENT'S MESSAGE*

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have to join as they are already affiliated with Goscom by a reciprocal arrangement.

Now that the Amiga 1000 is firmly established either in our consciousness or our homes, and soon to be joined by the A500, (it probably already is by this publication date) then I think it's time Goscom looked to expand in that area and supported the ever growing population of Amiga owners. This is currently being done and Jeff Campbell is as usual, untiringly organising just that. Goscom and TLCUG are joining together on this one, and the venue is to be: THE OLD PRIMARY SCHOOL, CNR ALLISON and RANKIN STREETS, WYONG (where TLCUG now hold their meetings). These meetings will be held every 2nd FRIDAY, beginning 7.00 pm on the 14th AUGUST. The Amiga branch will be run on different lines than the current format, so check with Jeff for more information.

One last point before I finish, Goscom will be intent on attracting more members this year and I personally think that we have not begun to tap the market of Central Coast Commodore owners yet but this I hope, will be corrected by more advertising. That about wraps it up for now except for one final note: anyone interested in filling committee positions still vacant, see me at the next meeting.

KAREN WILLIAMS - ACTING PRESIDENT.



Greetings and salutations , as a new era dawns in the field of personal computers about every two or three years its not suprising to see people who brought 128's a year ago line up to purchase Amiga's.

I don't think anyone had ever heard of the Amiga when I bought my 128 or I probably would have waited till it was released. But cheer up, even now in some dim dark laboratory a dedicated team of engineers are probably working on a plan for a P.C. to make the Amiga look like a Vic 20. (not that there aren't a few people still using Vic 20's ).

Well enough sour grapes lets look at some developments in the pipeline for the next generation P.C. RISC or reduced instructions set computers, some bright spark noticed that most computers spend 90% of the time using 20% of the M.L. commands available to them in ROM.

' Just think ' says bright spark, ' If we make a smaller, cheaper, faster but less intellegent computer the world will beat a path to our doorstep ! '.

Increased memory - just the other week I heard an Amiga user say ' If only I had just 1/2 Meg more, just 1/2 a Megabyte thats all '. The cost of memory chips keeps dropping and there capacity keeps increasing. The end result is that a computer with lots of memory has to work faster to compete.

Increase of speed is one thing that has a definate limit -although we're a long way from it . Plans for computers using optical fibres instead of wires allow greater speed and immunity from noise or electro-magnetic interference .

On the other hand, the visible part of the computer is the input & output devices - there is no real replacement for disk drives although CD or laser disk does offer some promise . The problems with Disk drives are mainly to do with moving parts- if it moves it must eventually wear out- or even sooner need adjustment.

The VDU, or monitor also has no competition- LCD screens still have a long way to go before we have the range of colour we are used to with CRT monitors the limits are size and power, the monitor is the largest part of your computer and uses the most power, if power consumption can be dropped and size reduced the use of a computer can be more flexible (imagine taking a computer to bed leisurly hacking away for an hour or so then in the morning a few rounds of leaderboard while waiting for the bus or train ) .

" Apathy is alive and well at Goscom, but who cares".

" Who got elected president?"

" Well you see we thought it would be more, you know, open dynamic sort of, if we didn't have one, anyway nobody wants the job ". But time will tell.

Karen has called a caucus (pronounced circus.) and formed a caretaker government from the ashes of the past. (With a couple of new faces.)

Neil has been performing beyond anyones expectations ( except his own ) calling out in person to visit and sort out the treasury (if you have any skeletons in the closet he'll find them). Already he has unearthed the missing receipt book, paid the photo copier off and changed bank accounts not to mention tracking down stray cheques. If he keeps up the good work he could look forward to a promotion. ( he. he. ).

written by \*\* SlickRick \*\*

and

typed in by ## SlickLyn ##

spelling by %% ViceKAREN %%





Editorial By Slick Rick



## *Something New Under The Sun*

When adapted to home computers a game player can easily gain incredible scores on most arcade style games, on menu driven business software the control of the cursor or of pointers and window or icon manipulation is instant and positive. A button is pressed to "enable" the fire control, by holding this down you have rapid fire, pressing it once and you fire once - only when your eyes focus on the target.

*The release versions come in several varieties dependant on price and options.*

1/ The monochrome "sunnies" your choice of green or amber. It acts as a joystick and delivers a single directional impulse, when tested it was 99.6% compatible with existing software.

2/ The "le spec" sunnies available in your choice of 4 out of 16 colours in 40 column mode or 2 out of 16 colours in 80 column mode. It operates as an analog device and sends information about speed as well as direction of movement.

3/ The "Eric Estrada" sunnies with 4096 colours to pick from in 4 modes, 640\*400 pixel ultra hires, interlace 640\*200 pixel, midres 320\*400 pixel and 320\*200 pixel lores modes. This model has a UV factor of 8 (for skin that tans easily) and offers protection from MICROWaves given off by hi-intensity monitors. It operates the same as a lightpen giving instant screen coordinates.

*Picture (above right) of computer guru*

*Andrew Farrell modelling the top of the range SUNNIES.*

*With thanks (apologies?) to Andrew THE AUSTRALIAN COMMODORE REVIEW, not to mention Eric Estrada and LeSpec sunglasses, (and Karen Williams for the original idea) and Beyond 2000 for factual background.*

*ed Slickrick.*



Andrew Farrell



# SEPTEMBER 1987

## COMPUTING CALENDAR

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3 TLCUG MAIN MEETING TONIGHT ----- NOTE MAGAZINE ARTICLE DEADLINE	4	5
6 FATHERS DAY.. FATHERS DON'T FORGET TO PUT IN FOR SOME NEW COMPUTER GEAR..	7	8	9	10	11 AMIGA WORKSHOP 7pm TONIGHT Room 9 OLD WYONG PRIMARY SCHOOL	12
13	14	15	16 GOSCOM MAIN MEETING 7PM TONIGHT *** NIAGARA PARK PUB. SCHOOL	17 TLCUG WORKSHOP MEETING TONIGHT ----- MAL'S BASIC PROGRAMING ALSO TONIGHT	18	19 12 NO CUT & PAS ALL WELCO 4 CRAIGEN ST. WYOMIN
20	21	22	23	24	25 13 WEEKS TO CHRISTMAS ----- START SAVING FOR SOME MORE NEW COMPUTER GEAR.	26
27	28	29	30			

**\*\* KEEP COMPUTING \*\***





RHEUMERS!  
\*\*\*\*\*

by Dick <1003>

Rheumer? - COMMODORE has released a new computer and not told anyone?? This classified ad appeared in A local Paper last week...

Maybe it's just a little BYTE better than the one I'm using at present?

\*\*\*\*\*

Rheumer? - THE EDITOR of OUTPUT has a newly acquired Sub Editor, in the form of newly wed EVELYN MELEHAN. Did THE ED. just marry her so he could get the photocopying and stapling of the mags done on the cheap???

\*\*\*\*\*

Rheumer? - NUGGETS CAMPBELL is to actually sell his OWN MOTHER to finance the purchase of his next piece of hardware!!! (Amiga's are dear!) Got the idea from a jeans ad he saw on the telly. Rheumer has it that he's been placing for sale ads on VIRTUEL!!!

\*\*\*\*\*

Rheumer? - New GOSCOM Treasurer, NEIL "S.R.A." WILLIAMS to kick freckle liberally in his new position. Rheumers has heard that SRA was seen talking to PAUL KEATING during the election hustings. There is also talk of Neil introducing a "Bottom-of-the-Harbour" deal to all GOSCOM members, along with negative searing and fiscal policy. Whatever all this jargon means is beyond us all. Seems S.R.A. Williams has taken the Treasurer job to heart.

After all, someone had to....

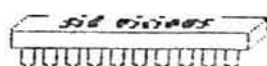
\*\*\*\*\*

Rheumer? - Somebody actually read the initial RHEUMERS column and took the hint. I recently saw an ad for an (almost) new VIC 20 for sale at only \$120!! Think of the benefits of owning a combination home computer/vegie peeler for just \$9.99! Sell off those 128s and AMIGAs now before COMMODORE supersedes them too!! Any (almost) new Amigas can be carefully dumped on my doorstep any hour of the day....

\*\*\*\*\*

Rheumer? - Non sexist computing to flourish with GOSCOM, now that we have a NON MALE type gender almost running the show! I say almost, because at the AGM (were YOU there?) the one and only KAREN WILLIAMS, (Yes, S.R.A.'s Bed Pal!) was elected as VICE PREZ on account of no-one wanted the Top Job! Karen has two BIG TIPS which she will gladly demonstrate at the next GOSCOM meeting on August 19th. Tickets are on sale at Mitchells Bass on ring 043429.

\*\*\*\*\*





Rheumer? - A newly appointed MICROBEE (The computer you have when you're not having a computer) employee to take each way-bets by selling his COMMODORE system, to use the freebies from work; but retaining "archival backups" of some of his best 64 software, "just in case the kids want to play Games one day!!" HANDY!  
It's a joke, Joyce!

\*\*\*\*\*

Rheumer? - One of the original GOSCOM members to finally be exposed to the supposed "Wonderful World of Modems" with his first taste via the club's NICE MODEM. Anything that was named NICE, on purpose, has to be under suspicion! "Why would I want one of those things when I can dial and talk to someone with just my Phone??"  
More next month....

\*\*\*\*\*

Rheumer? - COMMODORE International to introduce a cash-back scheme when you buy one of their Products. It works this way.... Buy a new AMIGA for around \$2000, then fill in the attached form, including name, address and Bankcard number; trade-in any old piece of electrical equipment (trannies, calculators, AMIGAS...) AND Commodore will send you back a cheque for \$300!!!

That is, after they have traced you and your house from the "attached form" and knocked-off your new AMIGA while you are out shopping!!

Easy aint it???

\*\*\*\*\*



"Agnes! It's that heavy, chewing sound again!"

# SECTOR EDITING

PAGE 1

FROM THE SOUTH AUSTRALIAN COMMODORE USER GROUP.  
MARCH 87 NEWSLETTER

I will be using the sector editor from Disk Disector 3 as this is most commonly used although almost any editor can be used. If you are still confused at the end of this article, then see me.

(N.B.) Start beginning on a BACKUP in case you make a mistake. I will not be held responsible for your mistakes so please use a BACKUP. The possibilities of what you can do to things is almost only limited by your imagination (NOT related to the last article on computer jargon), for example: You can revive scratched files, de-isepic isepic files, or write dummy files (ie. write files that have absolutely nothing in them), or even write personalised messages in commercial games(!), or make the directory extend onto 2 or more tracks!. I will explain how to do most of them as they are fairly easy to do.

When entering option 1 you are in direct access mode. Pressing the <?> key will tell you which keys do what (incidentally this is the same on the Disector 2 editor). Pressing 'r' will bring the cursor to the track position. Enter the track you wish to be read, (I will use the RDS vehicle file as an example). Just press return twice as the track and sector default values are 18, 00 respectively (also I will refer track and sector as t and s for economy's sake).

This will read t18 s00 which houses the BAM, DOS version of the disk, and (sometimes) a cosmetic disk ID. The first two bytes indicate what the next t and s the file is on. If the first character has a hex value of 00 then that is the end of the file. The third byte (byte 2: They number from 0, not 1) is the ASCII character 'A' (hex: 41) indicating a 1541/1551/1571/4040 format. Byte 3 is the double-sided flag which is ignored by the 1541. Don't bother changing it to hex 80 as the double-sided mode will check t53 s00 for the BAM for the second side as the BAM can only hold one side of a disk. bytes 4-143 concern with the BAM and unless you want to put an outrageous number of blocks at the end of the directory to astound your friends. If in case you want to do that, it is explained on page 107 of the 1571 users manual. You will notice that bytes 162-166 are to do with the ID and DOS version. You can change that to a five letter word if you wish, by pressing 'I' and entering it. After you have entered it, press return and then 'W' to write it onto the disk. Again, it is the same procedure as with the READ function. Usually you are writing that sector that you read it from, so just press return twice and it will write it on the disk. If you have a write-protect on the disk, it will tell you, so after removing it you will have to re-write it again. Cunning users will soon find out that if you do graphic symbols, you will get IDs up to 35 characters long! (actually, some programs don't like that, and they get annoyed), although the characters will appear as an RVS alphabetical letter (Don't worry, It will work). Bytes 167-170 are shifted spaces and can be ignored. bytes 171 onwards are not used by the drive at all and can be ignored.

If your cursor has decided to wander during this time, you can bring it back to byte 00 by pressing 'CTRL+s'. Pressing 'J' will bring you to the next directory block. Remember what bytes 0-1 did on t18 s00 ? well, the same applies here (in fact, it applies in all sectors that contain anything). Bytes 2, 34, 66, 98, 130, 162, 194, 226 all indicate what type of file the entry is. In hex, 81 means a sequential file, 82 means program file, 83 is relative, 84 is a user file. hex 90 will mark that file as DEL. In text mode, you may use shift a,b,c,d,p to lock these files respectively.

\*de-isepic meaning 'getting rid of the isepic sign on the screen while loading the program'

# SECTOR EDITING

PAGE 2

The two bytes next to the bytes specifying the file type points to where the DOS decided to store the program. You can get to the first sector of the program you want by positioning the cursor onto the byte and pressing 'J'.

Presuming you had done everything right you should be at a sector containing what you think is meaningless garbage. If the program before you is written in basic, it will not contain the usual BASIC keywords like PRINT or GOTO or anything of the like, because the computer uses tokens to save that program (a token is a numerical value for a BASIC keyword) therefore it will reduce the amount of space needed to store it than saving it as reducing the room needed by half or even more.

If you take the trouble to start decoding the tokens from Byte 2 onwards, you will find that bytes 2 and 3 will not make sense. That is because those particular bytes are the load address (which is sometimes the sys call). Subsequent sectors do not have the load address. If none of this makes sense to you make sure you have jumped to a PRG file as this is the file I am explaining to you now. If it still does not make sense to you either: forget this article or see me for help. Again, Bytes 0,1 point to the next sector of the file.

In a sequential file format, bytes 0,1 again point to the next t&s of the next sector it is stored on. On the last sector of the file, byte0 will = 00 and bytes 2-??? will contain the last bytes of information, where the rest is garbage and may be ignored. The last s also applies to the PRG file. Unfortunately sequential files are saved 'as is' ie: They are not and cannot be tokenised like a program. I will not bother with relative and user files as I haven't taken the time to find out about them and they aren't used very often anyway.

There were things I mentioned you could do with this so on with the article. To unscratch a file, you would just simply read the sector which the scratched file is listed in the directory and change the file type byte to whatever the file was before it was erased. For example:  
THIS IS THE LINE ON WHICH THE FILE IS LISTED:

wdfgPROGRAM NAME (and so on)

I would change it to

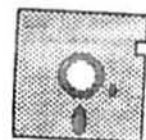
00[RVS b]fgPROGRAM NAME

to return it to a PRG file, and you would do the same for a sequential file and so on. To de-isepic a file you would jump to the MAIN program and jump to the sector to which you can see the isepic sign. Enter the TEXT mode and position the cursor to the beginning of the isepic sign and press space until the end of the sign. At the end of the isepic sign, there are two characters that appear like 'cbm t' do NOT get rid of these. I don't know what they do but I have a good idea.

Unfortunately, most of the time the isepic sign is split in between two sectors and you will have to do half on the first sector and write it, and then jump to the next program sector and finishing the desired task BUT make sure you don't delete the first two bytes or the probability of it actually working again is 1 in 225761. BE CAREFUL!

Dummy files are SO EASY to create, and you have most probably worked out by now how to do it. In case you haven't, then you would simply put a file type byte, followed by the t&s (I usually leave mine equal to 0), and then the name of the file. I do this if in case there were a few things to remember in a game eg: a password.

00[RVS p]00password is wdfg(REST of file entry)





# SECTOR EDITING

PAGE 3

As you may or may not know, the directory file is mainly in increments of 3. See below:

#####

First sector: 00

Next " : 01

" : 04

" : 07

" : 10

" : 13

" : 16

" : 02

" : 05

" : 08

" : 11

" : 14

" : 17

" : 03

" : 06

" : 09

" : 12

" : 15

" : 18

As you can see, they do have a pattern.

If you continually find that the next directory is filling up with its limit of 144 files, and you wish to use up the remaining blocks, you can jump to the last directory block used (you can tell when byte 0 = 0) and change that to a t&s that is available (if unsure, press 'Q' and then '2' to view the BAM. If you believe it is inaccurate, validate it) And change it to an unused sector (eg. change to t35 s00)

In hex: byte 0 = 23

byte 1 = 00

displaying

#0

0 as the first two bytes on the text screen

##### point to the next t&s. You can even extend the directory!

What uses are there for this?

Play a joke on a friend, or even make a games catalogue and alphabetize them, or just make use of those extra blocks (eg) for one block subroutines would occupy 144 blocks before 'disk full' would occur, so to fill up the disk with subroutines, you would extend the directory to (eg) t1 and you would be able to add 168 more one-block subroutines to your disk.

BUT... each time you add a new sector to the directory, you must validate the disk so the DOS acknowledges that that sector is used so it won't accidentally be used. This, unfortunately, cuts down the amount of subroutines that can be stored (by about 60) but at least you are using that disk fully.

After using this utility for quite a while, I'm sure you'll soon be writing personalised messages in commercial games such as RDS

Thanks to Lilli for telling me about disk editing and also to the programming duo Tony & Glenn for showing me how to edit and showing me which bytes do what on a disk.

This article, I hope, has helped you understand disk editing and also that some of your queries has been answered. If you still have problems then do not hesitate to contact me.

## THE RDS FILE

What they do

Byte 7: landmines

" 8: oil gallons

" 9: armour

" 10: crusher

" 12: traction (ice)

What they do

Byte 13: traction(dirt)

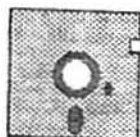
" 14: traction

" 19: top speed

" 20: acceleration

" 25: shock strength

As you can see, the max. value for any of these bytes can only be 255.



(this article has been submitted by Nick Hansen)



# SECTORS EXPLAINED

The following information shows typical directory and data sectors. The important bytes have been numbered and the list identifies the meaning of the numbered bytes. The first part is for the directory and the second part for program data sectors. \*\* Tells how to undelete a file.

1	2	3	4	5	6	7	8	9	10	11	12	
12	04	82	11	00	31	50	53	49	4d	41	49	1. Next sector on disk
4E	A0	A0	A0	A0	A0	A0	A0	A0	00	00	00	2. Hex code for file
00	00	00	00	00	00	02	00	00	00	82	11	
01	32	50	53	49	4D	41	49	4E	A0	A0	A0	3. Next sector on disk
A0	A0	A0	A0	A0	00	00	00	00	00	00	00	4. Hex code for file
00	00	02	00	00	00	82	13	00	53	55	50	
45	52	44	49	52	45	43	54	4F	52	59	A0	5. Type of file
A0	00	00	00	00	00	00	00	00	00	08	00	00=deleted
00	00	82	13	0D	44	49	53	4D	2D	45	44	80=sequential
49	54	4F	52	A0	A0	A0	A0	A0	00	00	00	82=program
00	00	00	00	00	00	07	00	00	00	82	11	83=user
13	52	45	4C	4F	43	41	54	45	2F	4C	4F	84=relative
41	44	45	52	A0	00	00	00	00	00	00	00	
00	00	02	00	00	00	82	10	02	44	49	53	6. Disk file search
4B	50	49	43	4B	45	52	A0	A0	A0	A0	A0	track 1, head 1
A0	00	00	00	00	00	00	00	00	00	11	00	
00	00	82	13	09	54	2F	53	20	41	4E	41	7. Disk file search
4C	59	5A	45	A0	A0	A0	A0	A0	00	00	00	00 Hex=0000
00	00	00	00	00	00	08	00	00	00	82	11	
02	46	41	53	54	42	41	43	4B	A0	A0	A0	8. File name
A0	A0	A0	A0	A0	00	00	00	00	00	00	00	9. File name
00	00	07	00									10. File name

## TRACK 18 SECTOR 1

12	07	82	11	0F	31	44	55	50	44	41	43	10. File name
A0	A0	A0	A0	A0	A0	A0	A0	A0	00	00	00	11. File name
00	00	00	00	00	00	11	00	00	00	82	10	12. File name
07	32	44	55	50	44	41	43	A0	A0	A0	A0	13. File name
A0	A0	A0	A0	A0	00	00	00	00	00	00	00	
00	00	11	00	00	00	82	14	02	41	44	4D	14. End of file
41	43	48	A0	A0	A0	A0	A0	A0	A0	A0	A0	(10)
A0	00	00	00	00	00	00	00	00	00	01	00	15. Next sector on disk
00	00	82	14	00	41	41	43	48	52	45	40	16. Next sector on disk
4F	A0	A0	A0	A0	A0	A0	A0	A0	00	00	00	continues as above to
00	00	00	00	00	00	01	00	00	00	82	14	the end of directory
04	33	52	4F	4D	55	40	41	54	4F	52	A0	
A0	A0	A0	A0	A0	00	00	00	00	00	00	00	
00	00	04	00	00	00	82	14	06	32	52	4F	
4B	55	4C	41	54	4F	52	A0	A0	A0	A0	A0	17. File name data is
A0	00	00	00	00	00	00	00	00	00	04	00	the Hex conversion
00	00	82	13	08	5A	45	41	43	48	A0	A0	of this code
A0	A0	A0	A0	A0	A0	A0	A0	A0	00	00	00	
00	00	00	00	00	00	01	00	00	00	82	14	
09	41	4C	41	4C	59	4D	41	43	43	A0	A0	
A0	A0	A0	A0	A0	00	00	00	00	00	00	00	18. Undelete file
00	00	01	00									

**TRACK 18 SECTOR 4** You can undelete a file only if the data has not been written over. Anytime something has been saved on a disk with deleted file some of the data has likely been written over. To undelete a file change its entry back to its original number 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. Sequential/program/user/relative.



Recently during my reading I have come across a number of facts and statistics that have made me think, and perhaps may occupy you for a moment or two:-

\*If the aircraft industry had evolved as spectacularly as the computer industry over the past 25 years, a Boeing 767 would cost \$500 today, and it would encircle the globe in 20 minutes on five gallons of fuel.

\*In the USA in 1983, two thirds of all microcomputers purchased found their way to the tops of business executives' desks. More than half of the \$13 billion of microcomputers sold in 1985 went to businesses. By 1995, it is expected that over 50% of the \$313 billion spent to buy computers will be for micros.

\*The first Apple computer was built in a garage using surplus parts mounted on a plywood board.

\*The United States Chamber of Commerce estimates that detected computer crime alone costs the American business community more than \$100 million a year. Most computer theft goes undetected, which means that the total loss to businesses far exceeds that figure.

\*Illegal copying of computer programs costs the industry some \$2 billion every year.

\*Howard Aiken's Mark I computer (the first programable computer) of 1944 could add three 48-digit numbers in one second, a speed of about 300 instructions per seconds. Computer speeds have increased by several orders of magnitude since then and are measured today in millions of instructions per second (MIPS). Powerful computers operate at several hundred MIPS; the most powerful reach speeds of thousands of MIPS, that is, billions of instructions per second.

\*The ball-point pen cost \$15 when it entered the marketplace in 1948.

\*By 1984, more people were conversant in BASIC, than spoke Norwegian, Swedish and Danish combined.

\*Forecasting International, Ltd., Virginia, predicts the numbers of workers in the following job areas by the year 2004: 8 million in telemarketing, 1.2 million in computer-aided design, and 1 million in software design. Growth in job titles shows the following annual increases: machine mechanics, 157%; systems analysts, 112.4%; computer operators, 91.7%; service technicians, 86.7%; and computer programmers, 77.2%.

\*Sargon, a popular chess-playing computer program, takes its name from a Mesopotamian king who conquered much of the known civilised world more than 4,000 years ago.

\*The first electronic digital computer, the ENIAC (Electronic Numerical Integrator And Computer), was completed in 1945 at a cost then of \$450,000. Today a pocket calculator is as powerful.

\*The CRAY supercomputer sell for up to \$20 million, depending on its configuration. Its installation requires specially prepared subflooring to carry its weight and special plumbing to carry the fluoro-carbon fluid needed to cool it. The purchase price includes the services of two full-time engineers to maintain it - forever!

If a person stops to consider the recent changes in computer technology it seems to me that it becomes impossible to predict the future in this industry, due the rapid leaps and bounds which constantly occur. Since 1971 when the first microprocessor was placed on a silicon chip, the micro industry has sped into the future at a breakneck rate, hopefully towards many great achievements.

One thing is for certain. We won't have to wait long....

Greg Porich.

# HINTS AND TIPS

BY FRANK JAMES

A Floppy Disk, when formatted on a 1541 or similar, is divided into circular tracks. Track number 1 is on the outside (it is the longest) and track 35 is on the inside of the disk. These tracks are subdivided into sectors. Because the outside tracks are longer they contain more sectors than the inner ones.

Tracks 1 to 17 contain 21 sectors.  
Tracks 18 to 24 contain 19 sectors.  
Tracks 25 to 30 contain 18 sectors.  
Tracks 31 to 35 contain 17 sectors.

A subdivision of a track and sector is called a Block. This sample program lets you read any block of a floppy disk. Some of the information from a disk may not be printable characters and may not be readable on screen.

```
5 INPUT"WHICH TRACK AND SECTOR";T,S
10 OPEN15,8,15
20 OPEN2,8,2,"#"
30 PRINT#15,"U1:"2;0;T;S
35 PRINT#15,"B-P"2,0
   B$=""
   FOR L=0TO255
60 GET#2,A$
70 IFST=0 THEN B$=B$+A$:NEXT
80 PRINT"FINISHED
90 CLOSE2:CLOSE15
100 PRINT B$
```



\* \* \* \* \*

To include a program listing in a speedsript document I use this method. First I load the program into memory. Then I enter this line:

```
OPEN 3,8,3,"Program name,S,W":CMD3:LIST
Then:
PRINT#3:CLOSE3
```

Next I load and run Speedscript. When I am ready to include the program listing I press f7 and at the LOAD prompt I enter:

Program name,S

The listing contains lower case m's for Return Characters so I select SHIFT/CTRL/G and at the HUNT FOR prompt I enter m and at the REPLACE WITH prompt I enter +

Sometimes I include some spaces after the + at the REPLACE WITH. This nicely indents the listing.

\* \* \* \* \*

```
2 REM * ALPHABET POKER *
3 REM * CLEAR SCREEN THEN RUN *
4 REM
```

```
5 A=RND(0)*26+1:POKE1030+A+40*12,A:POKE55302+A+40*12,14:FOR I=1TO150:NEXT:GOTO2
```

DON'T LEAVE ANY GAPS



# Can of Worms Award

Let me tell you a tale of incompetence. I know there are many of these but this is computer related and relates in part to the ongoing argument of whether 'to copy or not to copy'.

As some of you may be aware, we (in my household) have espoused the virtues of a set of business software for the C-128, namely THE POCKET SERIES made up of POCKET WRITER, POCKET PLANNER and POCKET FILER. Now without a doubt, in my mind, they rate up there with SUPERSCRIP 128 and SUPERBASE 128, both of which are knockout powerful programs. Pocket Planner does everything but play the national anthem. As a spreadsheet it has no equal, at least none that I have seen so far for the C-128. It creates and updates graphs as well as prints with two options including SIDEWAYS. Pocket Writer also is a neat, easy to use word processor with the same output as most word processors but I find it's greatest asset is it's ease of use. No giant size manuals to wade through, and a novice can have it up and running in no time at all. If anyone has tackled SUPERBASE and the dreaded manual while it may be the greatest program since sliced bread, you'll also be aware that it's no picnic learning how to 'fly' it the first few times. Well, Pocket Filer has the same capabilities and yet again, it's ease of use makes it a most desirable addition to any software library.

Having said all that, on the down side, the bottom line is, YOU CAN'T BACK THEM UP. At first this does not seem an insurmountable problem because for a cost of \$18.00 dollars a program, you can send away for backup copies, and believe me, after working with the PLANNER and FILER especially, gathering and organising blocks and blocks of data on disks you begin to sweat when you think of all those hours down the tubes if you can't access that data anymore and have to begin again.

So there we are, at the stage where it becomes most necessary to have that backup system at the ready. At first it seems like a straight forward solution. When you purchased the said software (of overseas origin) inside the box was a warranty card with a registration number, while printed on the disk label was a serial number, which means they have most angles covered. After first playing it safe and phoning to check the details, we sent a cheque covering the costs and a letter quoting the serial numbers to the only distributor in the country, none other than IMAGINEERING who are based in Sydney. The date was 23.3.87. Finally, on the 9.6.87, exactly eleven weeks and one day later, we received by courier, the backup copies. Letting out a short sigh of relief, we were much dissatisfied when no matter which way we held our mouths, they stubbornly refused absolutely to load. Of course after the usual phone calls, we were advised to send them back and they would replace them with working copies. Gratefully we did this while at the same time crossing fingers and feeling dread about a similar time delay as was previously experienced. I might mention, that in all this time, our cheque still had not been presented at the bank, which we found to be a strange way to conduct business. Well, I did state at the top, this was about incompetency.



# Can of Worms Award



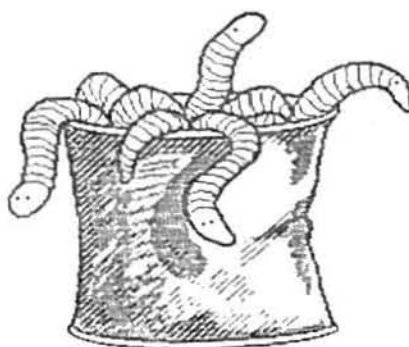
Anyhow, surprise surprise, on the 23.6.87, a mere two weeks later, the replacements arrived. Still the cheque had not been presented, and still the software would not load. Then the inevitable phone calls and a repeat of before, send them back and wait.

Well we are still waiting at the time of writing which is 13.7.87, almost three weeks later, the cheque has now been cashed and we still have no backups. We have even more data riding on the back of this still excellent software. But when does it become a risk we are no longer willing to endure? Pretty soon methinks. We are feeling very wobbly kneed about the whole thing and if we can't obtain trouble free backups I do not think we can persist with this line of software.

Another thing to ponder upon is the fact that we can't shop anywhere else for the same product, as I said, IMAGINEERING is the sole distributor for this item of software. Up till now we have been faced with additional costs for repeated phone calls, calls whereby no-one wanted to know about us because we were not buying a half a ton of software and we got the old, 'oh, they aren't in now, I'll get them to come you back' run around, but of course they never did. Then there's the cost of return postage including certified mail and proper packaging and lots of time (16 weeks or 4 months) and inconvenience which we could have done without had we been able to back it up ourselves, and the ultimate insecurity of not knowing when it would load for the last time. The latter consideration is not a problem normally but given the unreliable history of this heavily protected software, then it is indeed understandable. So, do we take the further risk and invest more time into using this software or decide now, to put all our data into another basket. Whatever happens this situation is food for thought when next faced with buying software, particularly business oriented software.

A footnote or irony: Whoever coined the phrase 'The Lucky Country', sure did not anticipate PC's and their related software nor their hapless Aussie owners.

BREN WILLIAMS





# MEGADISC FOR THE

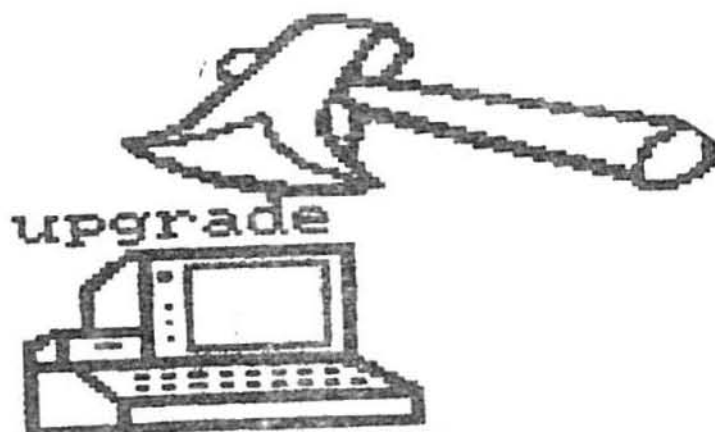
BY COMMODORE  
**AMIGA™**

Magazines on a disc seem to be yet another off-shoot of our information age. MEGADISC for the AMIGA has just appeared and is now available. It is all Australian, and full of reviews, articles, graphics, animations, hints and tips and interesting utilities. The editors claim that a magazine on a disc is the perfect medium for this kind of communication, because all the contents of the disc can be looked at, edited, re-used and easily improved upon!

For this type of computer, there is a lot of flexibility - apart from a magazine, there are plans for companion disks for animation, graphics, audio and so on. Subscribers to the C64 disk-magazine from Australian Commodore Review will know what they mean.

The editors of MEGADISC are trying to add to the growing network for the AMIGA, and are linking up with other AMIGA groups, both here and overseas.

And with a user base here that is small but growing, they are hoping



that as many AMIGA users as possible support them, by buying the disc and by making contributions and suggestions.

Anyone interested in finding out more about MEGADISC can contact the editors directly:

Ring Tim on (02) 959 3692 or Ian on (02) 436 4658.

For any home user interest in an AMIGA with the brilliant graphics, which are almost as clear as a photograph, the sound system, which almost outway the Fairlight, and multitasking, which outways everything, and you don't want to pay the huge price tag then the 8500 might be the go. At less than 1000 it's just within the range of most home users. (You'll just have to sell all your DIRE STRAITS CD's.)

The NINJA....

**A.S.I.G.**

**Ph. 907090 or 843429**



**AMIGA**

**Computer User's Group  
Meets on the 2nd Friday  
of each month at 7.00pm  
in the old Primary School  
Cnr. Alison Rd & Ranken St  
Wyong. Visitors Welcome...**

# Flights of Fantasy

Adventure Reviews,  
Hints and Game Help.

Bounty Bob Strikes Back.

You don't even need to reset the computer for this one!  
Enter code 57502 in the code box, then press A and [F3]  
together to give you the best cheat for this game yet!

BUT WHAT DOES IT DO ??????????????

Well type a number from 01 to 23 and  
you will find out!

## ZORK I

IN ZORK I the object of the game is to discover the 20  
treasures, and escape from the Great Underground Empire Alive  
I shall attempt to put all the clues, and other  
information that I know of in one file as a source of clues  
on how to play the game.

For those that have played the game will know just what a  
challenge it is, and how frustrating it can be just trying to  
solve one of the many cryptic clues

The other aid that keen Adventurers use is to draw a  
map. This only partially helps in Zork, because as you attempt  
to retrace your steps, you don't always end up at your original  
location.

However, it is still essential to draw a map in order  
that you can find your way around in the GREAT UNDERGROUND  
EMPIRE

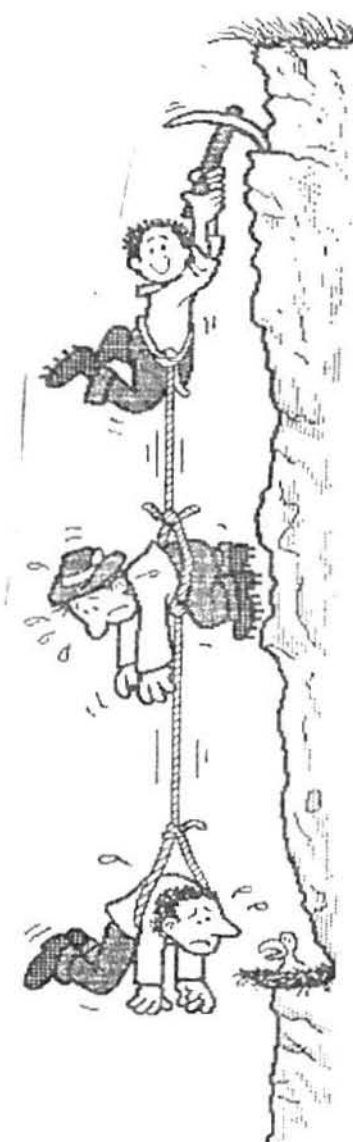
ITEM	LOCATION	PURPOSE
MAILBOX	WEST OF HOUSE	?
LEAFLET	IN MAILBOX	?
PILE/LEAVES	NORTH OF HOUSE ? Try moving them.	
GRATE	NORTH OF HOUSE ? Can only be opened from the inside	
SACK	KITCHEN	? Use it to carry things, contains other things
BOTTLE	KITCHEN	?
ROPE	ATTIC	CLIMB DOWN
KNIFE	ATTIC	WEAPON
SWORD	LIVING ROOM	WEAPON
STILETTO	WITH THIEF	WEAPON
AXE	WITH TROLL	WEAPON
TROPHY CASE	LIVING ROOM	STORAGE put all your goodies inside for safe keeping

# Flights of fantasy

Adventure Reviews,  
Hints and Game Help.



ITEM	LOCATION	PURPOSE
LAMP(BATTERY)	LIVING ROOM	LIGHT
RUG	LIVING ROOM Something underneath	BARRIER
TRAPDOOR	LIVING ROOM	CELL.ENT Entrance to cellar
WOODEN DOOR	LIVING ROOM	?
STUDIO		?
CHIMNEY	You can go one way (up)	
BLACK BOOK	ALTAR	?
	Magical item	
MATCHBOOK	IN VIS ROOM	LIGHT
CANDLES	ALTAR	LIGHT
	Required to get into Hades	
GUIDE BOOK	VISITORS ROOM	INCOMPLETE
SCREWDRIVER	MAINT.ROOM	TOOL
WRENCH	MAINT.ROOM	TURN BOLTS
	Use to let water out of dam	
TUBE	MAINT.ROOM	?
PILE/PLASTIC	BELOW DAM	INFLATE
PUMP		INFLATE PL
TROPHY CASE	LIVING ROOM	STORE TREASURE
TRUNK/JEWELS	IN RESERVIOR	TREASURE
TRIDENT	ATLANTIS ROOM	TREASURE
BRACELET	COAL MINE	TREASURE
EMERALD	IN BUOY	TREASURE
CRYSTAL SKULL	IN HADES	TREASURE
BAG OF COINS	IN MAZE	TREASURE
JEWELLED EGG	IN LARGE TREE	TREASURE
PAINTING	GALLERY	TREASURE



# WINGS OF FANTASY

Adventure Reviews,  
Hints and Game Help.



ITEM	LOCATION	PURPOSE
PLATINUM	LOUD ROOM	TREASURE
COFFIN	EGYPTIAN ROOM	TREASURE
SCEPTRE	IN COFFIN	TREASURE
SCARAB	IN SANDY CAVE	TREASURE
TORCH	DOVE ROOM	LIGHT

## MISCELLANEOUS CLUES

1. A boat requires a pump, as well as a bit of bailing.
2. Stuck in a maze, use objects to mark various parts of it.
3. You cannot open the egg without destroying it, but there is an expert at picking locks.
4. Breaking the mirror was of no help!
5. There is a magic word to be used in the temple. (TEMPLE).
6. What does one do in a temple (PRAY)
7. The loud room and the platinum. What a terrible ECHO.
8. The dam, and the control panel with the bolt, requires a spanner. Only when the light is green.
9. Garlic-repels vampires
10. Magic Gunk should be carried at all times.
11. To get into Hades you must have the candles, and prayer book, and bell
12. The grate under the leaves can only be opened from inside the maze.
13. Watch the buttons in the control room, one causes the room to fill with water and then prevent you from re-entering the room.



Anybody who would like to add to this file, leave a message



Adventure Reviews,  
Hints and Game Help.



Or if you would like to prepare a text file using a wordprocessor, on any other game you could upload it to the board using library and Jeff will add it to this file, For the benefit of all users.

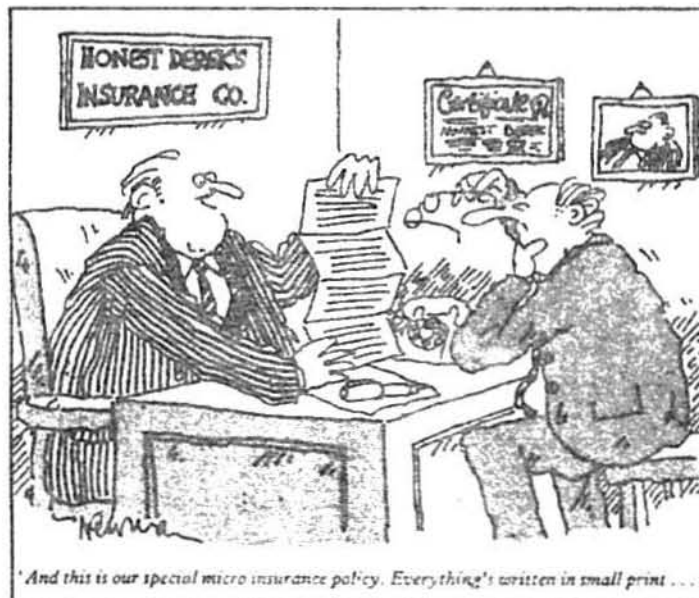
PS. I started playing this game, but due to other commitments have been unable to complete it.

I also do not wish to begin Zork II until I complete ZORK I.

If you would like a map to accompany all the help above leave a e-mail to me.

MUTANT STRAWBERRY

That is all I can give you at the moment but i'm allways getting new clues so if you want some clues for a game e-mail me on com-link (043) 4123135 and I'll see what I can do.  
Mutant Strawberry



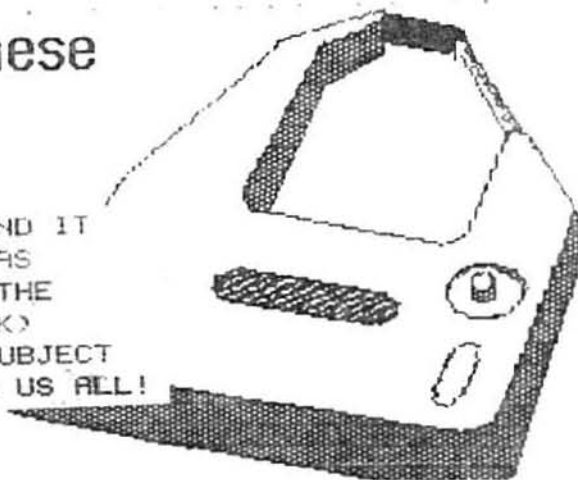
'And this is our special micro insurance policy. Everything's written in small print ...'

JUST FOR THE INFORMATION OF MEMBERS  
I HAVE INCLUDED THIS AD.

HERE IT IS PETE ! THE ONE YOU'VE  
BEEN WAITING FOR !

Throwing these  
away.....

I REINK MY OWN RIBBONS AND FIND IT  
MESSY , ALSO MY PRINTER HEAD HAS  
STARTED TO JAM , MAYBE I USE THE  
WRONG INK (STAMPING MACHINE INK)  
IF ANYONE KNOWS MORE ON THE SUBJECT  
PLEASE WRITE A FEW WORDS FOR US ALL!



\*\* SLICKRICK \*\*



.....is a bit like  
throwing away this

**Lazarus Ribbons**

provides a complete  
ribbon refurbishing  
service, which includes:

- inspection of cartridge and ribbon;
- re-inking ribbons in reasonable condition (using manufacturer-specified ink formulation);
- replacement ribbon inserted or whole cartridge replaced where required.

The price of this service depends upon quantity and the type of ribbon involved,  
averaging about \$4 per unit handled. This includes return postage and packaging.  
**Compare this with the price you are paying now for new ribbons!**

Apart from the financial benefits accrued, we contend this is a socially responsible  
activity, as it involves *recycling* rather than *disposal*. It is also *import-competing*.

**Most dot matrix printer ribbons can  
be re-inked several times, provided  
the fabric is not torn or frayed.**

Money thus saved can be diverted to other areas  
squeezed by tight budgetary constraints.

Please tell me more about Lazarus's ribbon recycling service

We use the following types of  
printer:

Name.....

Organisation.....

Address.....

..... tel. ....

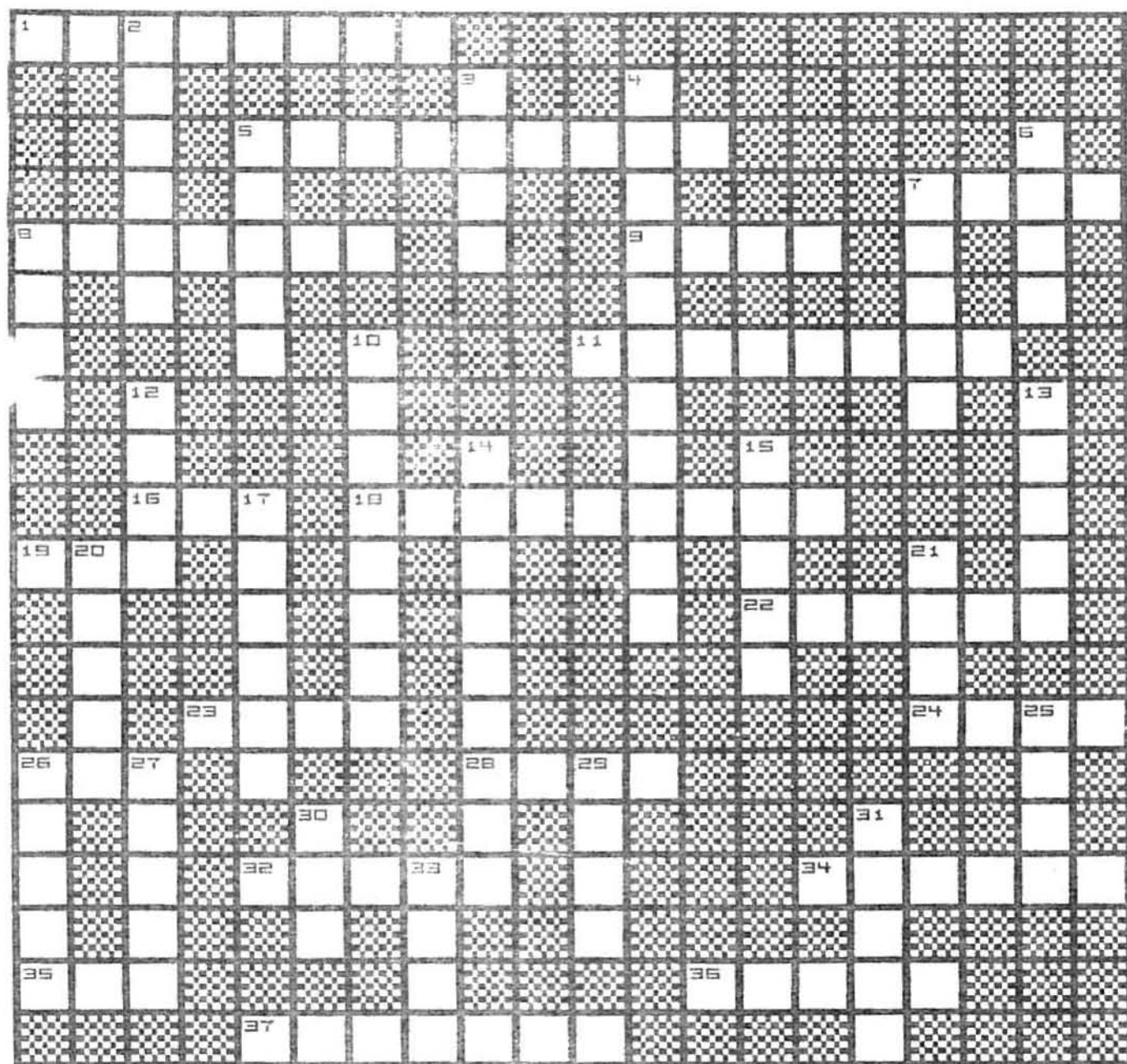
For more information,  
send this coupon to  
**Lazarus Ribbons**.  
As a special introductory  
offer, we will re-ink one  
cartridge of your first  
consignment for nothing!

**Lazarus Ribbons**  
70 Wolseley Rd  
Mosman NSW 2088  
tel: (02) 960 2737

# THE CROSSWORD

GET A PEN OR PENCIL  
AND AWAY WE GO

AUG 87



## LOAN PAYMENT

This simple program will calculate monthly payments for various sorts of loans. Everything is lined up and rounded off, so the effect is very polished. Before counting your money, though, get confirming figures from your banker.

```

100 REM * LOAN PAYMENTS *
105 PRINT
110 INPUT "[ 4 spaces]AMOUNT OF THE LOAN";P
120 INPUT "[ 4 spaces]# MONTHLY PAYMENTS";N
130 INPUT "ANNUAL PERCENTAGE RATE";R
140 R=R/12/100
150 P=INT(100*P*R/(1-1/(1+R)[up arrow]N)+.5)/100
155 P=P+.0001:P=INT(P/.01+.5)*.01
160 PRINT "YOUR MONTHLY PAYMENT IS";P
    
```



# CROSSWORD CLUES

## CROSS CLUES

1. A quick way from the keyboard to choose a menu item instead of the mouse.
5. A car made by Holden.
7. ----glider.
8. To show an enlarged view of a painting.
9. A magnetic medium for storing and retrieving information.
11. A set of keys used for typing?.
16. What you would do with oars in a small boat?.
18. The place where the last thing that you cut or copied is kept.
19. Computer Aided Design.
22. To pick on item on a menu?.
23. What you may get into a car by?.
24. Bard's ----.
26. Random Access Memory.
28. A visual representation of a Tool, project, or disk.
32. A device you move on a flat surface to move the pointer.
34. What you turn on in your car when it rains?.
35. --- Rodgers and Trigger.
36. What fits onto wheels on your car.
37. ----- DOS.



WORD LIST: AUG 87

AMIGA  
BRIDGESTONE  
CAD  
CLIPBOARD  
CLICK  
COMMODORE  
COPY  
DISK  
DISKDRIVE  
DOOR  
DOLPHIN  
ICON  
KEYBOARD  
LAIR

MAGNIFY  
MENU  
MOUSE  
MONTY  
OPEN  
ORANGE  
PIXEL  
PRINT  
PRESS  
RAM  
RADAR  
ROW  
ROY  
SELECT

## DOWN CLUES

2. Agent -----.(like in fruit)
3. To duplicate.
4. The company who makes computer cat tyres?.
5. To press and release a mouse button.
6. What most people do when they are driving away after visiting friends?.
7. What is kept in the boot incase you get a flat tyre?.
8. A list of items you can choose from?.
10. The long key at the bottom of the keyboard that you press to enter a blank space?.
12. This ---- helps make up a sentence?.
13. ----- Shop.
14. What to put your disk into?.
15. To push down a mouse button or key on the keyboard.
17. A rectangular area in a screen.
20. A commodore computer?.
21. Letters, numbers you can enter from thr keyboard?.
25. Dragon's ----.
26. ----- Rat Race.
27. ----- On The Run.
29. The ---- statement opens a logical file & redies the assigned Physical device.
30. The --- Shop.
31. One of the small elements that together make up the video display.
33. Where you buy disks, toys, etc.



SHORTCUT  
SHOP  
SPARE  
SPACEBAR  
STAR  
TALE  
TEXT  
TOY  
TYRES  
WAVE  
WIFERS  
WINDOW  
WORD



# A NEW BUZZ WORD

## ERGONOMICS AND THE HOME MICRO...PART TWO

BY ANDY LAMING

Last month I related to you some of the things that I found interesting about the study of ERGONOMICS or efficiency of body movement and lowering of strain on the body due to proper design. Let me remind you that I do not claim to be any sort of expert in this study, simply an interested reader of journals.

Last month we looked at furniture design and the total work space, from the desk and chair to the view that you give yourself at your desk. This month I thought that we might take a look at the keyboard, its history, weaknesses and what is being done to improve its design.

### A QUICK HISTORY LESSON.

Keyboards are modelled on the first commercially successful model built in 1873 by Sholes and Glidden. It was designed for 'hunt and heck' typing rather than touch typing as we know today. It wasn't until some 16 years later that two handed touch typing was born (and still doesn't exist with yours truly!). The layout of the keys was such that jamming of the letter bars was avoided due to the separation of common letter pairs. By 1890 most keyboards were based on the QWERTY layout (named after the first six letters of the top row).

This layout of keys was quite satisfactory for one or two finger typing but increasingly speed was of prime importance. The typist had to be faster than handwriting or there was little point. The flat nature of the keyboard does not suit the touch typist at all well. The fingers are of different lengths and so the hand is angled awkwardly at the wrist for the little fingers to reach the keys. The shoulder width of the operator exceeds the width of the keyboard and hence the wrists are bent outwards as the arms cross the body front. Take a look at what I mean as you sit at the keyboard with your fingers spread over the home or central row of the keyboard. This is not a natural or relaxed pose in which to work over a long period of time. As such, stress is placed on the arms and wrists as well as encouraging rounding of the shoulders.

By 1920 the Remington keyboard (as it became known) was firmly entrenched as the accepted format. That the design was causing operator problems was first evident in 1926 when Klockenburg recognised the problem and designed the first split keyboard. A further sophistication was proposed in the 1930's when Dvorak suggested a layout that would balance finger layout with finger strengths.

The survival of the QWERTY keyboard has been largely the result of the limitations of early mechanical design and later habit, custom and good salesmanship rather than sound human factor considerations.

### WHAT'S THE ANSWER?

Regular periods of rest are of course one answer. Studies of the electrical activity of the muscles have shown that a maximum of 30



to 40 minutes can be spent keying before acceptable levels of muscle fatigue are exceeded. This period can be extended if the task requires frequent work/rest regimes but this is usually by accident rather than conscious effort by the operator.

There are more radical movements toward strain reduction for the keyboard operator. These involve the redesigning of the keyboard itself. Several new designs have been offered as a solution to the problem of operator fatigue. They all attempt to provide the operator with a hand/arm position that is more natural and relaxed. If you bend your elbows and extend your forearms in front of your body with your hands relaxed, you will see that the most natural position of your hands is slightly cupped. The fingers curl inward and the fingers are bent while the thumbs are angled inward and upward. The hands are not layed out flat with the fingers horizontal as is the case when using a conventional keyboard.

It is this cupping of the hands that most new keyboards try to accommodate. The keyboard is split into a left and a right field, the keys are usually curved and the central keys are raised. The split area avoids the forcing together of the hands, the curving rows of keys caters for the different length fingers and the raised centre suits the cupping of the hands.

The actual key layout can be re-set to allow for more efficient movement of the fingers by increased use of the home row (middle row). If the fingers do not have to travel away from the home row as often, speed is increased while fatigue is reduced. In the 1930's the Dvorak layout was devised by a U.S professor, and it simply changes the position of the keys so that the most frequently used keys are closest together. World typing records are usually set using a Dvorak keyboard but it does not solve the ergonomic concerns of the operator. It is also possible to re-define an existing keyboard through the running of software but this is still only a partial answer to the problem.

A more radical design is the Maltron keyboard. These look a little strange with their banked, arched and raised keys but unfortunately they are not readily available. This keyboard is marketed in an IBM PC plug-in compatible form and is slowly gaining acceptance as a stress reducing unit.

#### THE MONITOR NEEDS CONSIDERATION TOO.

To the home computer user, the video display unit represents the biggest problem. We seldom spend hours typing with a word processor and so our hands and shoulders are not exposed to the stresses of the typing-pool set. We may, however, spend hours with our eyes glued to the monitor screen.

To make a cheap computer, you have to use cheap and readily available technology. For displays this means a television type monitor. These are not the best type for the eyes in long term use. The problem is with the clarity and the stability of the

display as well as the distance available for the operator to sit back from the screen. The ideal distance to sit from the screen is about four times the height of the screen. With monitors being about 25cms high, this means we should be about a metre back from the screen. Most desks do not have sufficient depth to allow for such a distance.

If you can manage to be back the correct distance, you probably will have difficulty reading the letters as they are displayed. The ideal distance is about 50 to 70 centimeters back from the screen. That's about the same as for reading typed material on paper. To be comfortable over a long period, with the display at this distance, then the monitor has to be of superior quality, and not a T.V or modified T.V.

Some new monitor displays offer a resolution of over 400 lines per screen rather than about 250 lines on the standard television type monitor. Also, the screen is updated 25 to 30 times more frequently, effectively reducing the screen flicker that you may not be aware of but your eyes notice and continually compensate for. Refreshing the screen more than 35 times per second eliminates the problem but will need modification of the computer itself to produce such an output. This increases the cost and therefore is not generally suitable for the home computer market.

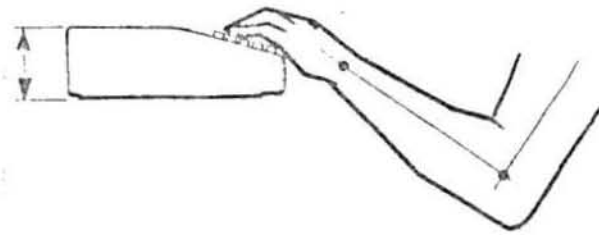
About all that we can do to improve the monitors that are available, is to use a tilting, rotating stand for the display, so you can adjust it. Some sort of support that raises the monitor to eye level is also a good idea. This way you can look directly at the screen without raising or lowering the head or eyes. The top of the display should be no more than 15 degrees below your line of sight. If you type a lot of listings from magazines or books then you should be using a stand that holds the listing at the same distance as the display. You shouldn't be looking at the keyboard when typing, rather the eyes should be on the screen. I guess I had better get Mastertype out again!

I hope these articles have been of interest to you but I'm sure that you will realise that they have been in no way comprehensive in their treatment of ergonomics and the home computer. If you would like to read further you could look up one of the references listed below.

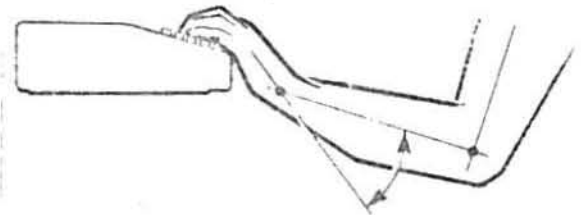
#### FURTHER READING :

- |  |   |
|--|---|
| <u>"ERGONOMICS AND VISUAL DISPLAY UNITS"</u> | Published by the Ergonomics Society of New Zealand.     |
| <u>"ERGONOMICS AND THE HOME COMPUTER"</u>    | Eric Lindsay<br>Microbee Online Magazine<br>March 1986  |
| <u>"DEATH OF THE QWERTY KEYBOARD"</u>        | Michael Rose<br>Design World Magazine<br>Number 8, 1985 |

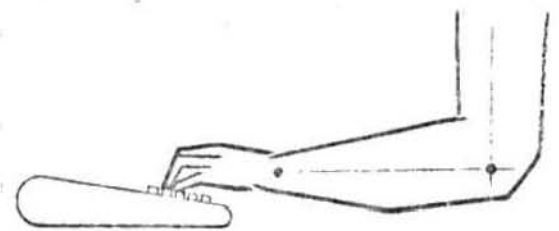
Thick keyboards and high desks make keyboard operation highly stressful. The elbows are far too low resulting in shoulder hunching.



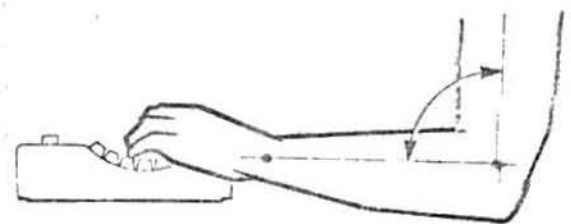
As upper arms tire, alternate postures will be assumed. A common fault is to drop the wrists putting back pressure on the lower arms. This is again the result of having the elbows too low in relation to the keyboard.



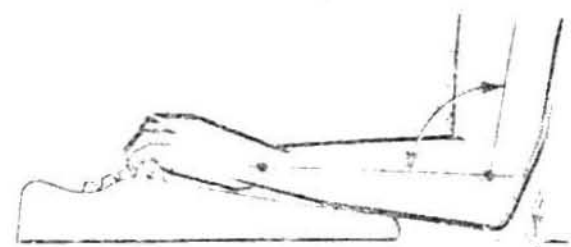
Thin, low keyboards do not require as much angle as thicker boards. The 90 degree angle at the elbow is far more desirable. Keyboards such as the Microbee Premium provide for more relaxed posture with its low profile design.

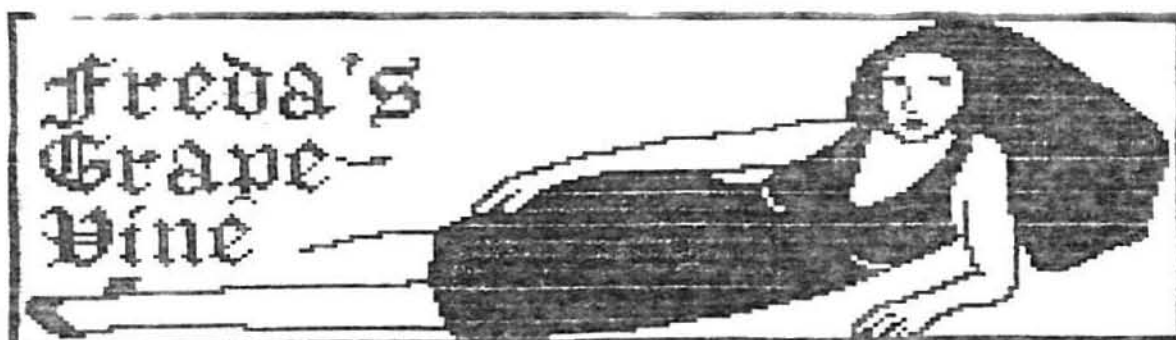


Keyboards such as the Maltron have dished keys which are better suited to the natural movement of the fingers.



Future keyboard designs may well employ wrist rests to ease pressure on the arms and shoulders. These are yet to be ratified by ergonomic experts.





Wedding bells were ringing at Umina at the end of June. It looked like a hackers picnic gone wrong. Everyone was dressed in their finery and not a disk in sight! There were hackers to the left and hackers to the right and even some non-hackers. The occasion was the wedding of Evelyn and Rick Melehan our Output editor. Microbee defector Andy Laming did an imitation of Lord Lichfield with the camera and Dave Babuskin (another one of ours) held his own with the video camera. Evelyn looked lovely in a beautiful long white dress and the weather was warm and balmy.

Steve Quinn has been away exploring the inside of Motel rooms in warmer climes such as Grafton and Maclean in the north of NSW. He will be breezing in and out of Sydney for awhile yet.

It certainly does pay to be in the right place at the right time, doesn't it. Last week at Kmart Woy Woy, there was a C-64 selling for \$125.00. It had full warranty but was still in the old case. Someone got a bargain.

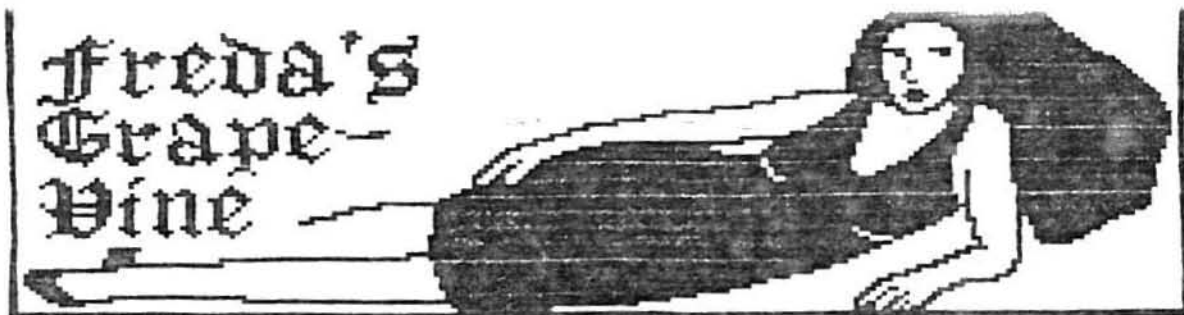
Nuggets has been honing up on all aspects of the Amiga in anticipation of buying his own as well as getting the Amiga section of Goscom and T.L.C.U.G off the ground. That will be the fun part; no business stuff getting in the way of true hacking the machine. Workshop will be the key word there and plenty of public domain software floating around I dare say.

MAD MAL is wowing them with his Basic tutorials at Tuggerah Tuggers. That's T.L.C.U.G to me. See Frank, I got the name right this time. Anyhow, as I was saying, there is a great line-up for Mal's lessons and I personally can recommend his teaching prowess as I learned quite a few things from him when we did tech together back in '85. Since then I haven't learned much but I'm 'having fun' like Mr. Emerald does all the time on the Bulletin Board.

As a post script to the fourth paragraph above, Nuggets is now a proud owner of an A1000 and is smiling from ear to ear.

Wasn't it nice to go to T.C.U.L.G and see none other than the one and only FRED. My eyes glazed over, remembering days of yore when we would go a round or two in the magazine. Those were the days. FRED too has the AMIGA bug which will make for interesting AMIGA meetings. Speaking of Amigas, you can almost feel the fever rising now, as the 'blast off' date for the A500 has arrived; the biggest question for most people is, which one to buy? A500 or A1000. The A1000 seemed to be slightly in front last month given the \$300 cash back from Commodore.

# Freda's Grape- Vine



At the September meeting (third Wednesday) NEIL (Superman) our new treasurer, will be showing GOSCOM's financial situation on TELEBANK whilst combining the pertinent details on a spreadsheet. While Telebank and Viatel have been done before, this is the first time GOSCOM's financial status has been involved. Should prove interesting.

Anyone currently not owning a modem who thinks maybe they would like to try the world of Telecommunications, can now try out the club's nice modem. There is a roster system in operation and anyone wishing to be placed on it, see Karen at a meeting. You too can explore the wonderful world of Nuggets' BBS.

Also now available to members is a new selection of public domain software, previously not been seen before at GOSCOM. Don't forget to check for any programs you may fancy.

That is about it for this month, as they say on the BBS, see you round like a rissole. YECH! And now I'll get off.





# BASIC TUTOR 8



BY FRANK JAMES  
PAGE 1

This lesson is about FOR NEXT and IF-THEN. First we will look at FOR NEXT loops.

To do something a particular number of times you could use the FOR-NEXT statement. Let's say we want to print HELLO YELLOW on the screen 10 times. It could be done like so:

```
10 FOR X=1 TO 10
20 ?"HELLO YELLOW"
30 NEXT X
RUN
```

How about this one:

```
10 FOR X=1 TO 10
20 ?X;"HELLO YELLOW"
30 ?
40 NEXT X
RUN
```



Let's study the sequence of that program. The FOR statement causes a loop to start in line 10. Line 20 prints the value of X followed by 'HELLO YELLOW'. A blank line is printed in line 30. Then the computer finds NEXT in line 40. This tells the computer to increase the value of X by 1 and to loop back to FOR. Now the value of X is compared if it is higher than 10 then the new value of X is printed followed by "HELLO YELLOW" and a blank line. The program continues until the value of X is 11. At this stage the program jumps to the line it finds after the NEXT statement and prints 'FINISHED'.

From this explanation you will see that the value of the variable in a FOR-NEXT loop is always higher, than the upper limit it was originally set, after the loop is finished.

The increment of the variable in the FOR-NEXT is taken to be 1 unless stated otherwise with a STEP statement. For instance:

```
10 FOR A = 1 TO 100 STEP 5
20 ?A;"PINK ELEPHANTS"
30 NEXT A
40 ?A
RUN
```



The STEP can be any size you like. It could be 0.1 for instance or 123.78. It can be a negative number or it could even be another variable. Like this:

```
10 A = 25:B = 20:C = -0.5
20 FOR X = A TO B STEP C
30 ?X
40 NEXT X
RUN
```



# BASIC TUTOR 8

PAGE 2

Can you complete this program, so the computer displays your name ten times. You need to fill in the numbers in line 20, and put your name in quotes after the PRINT command in line 30.

```
10 ?CHR$(147)
20 FOR G = TO
30 ?
40 NEXT J
```

You can make the computer do all sorts of things after an IF-THEN command. For instance you can tell it to jump to another program line using the GOTO command. You can also make it stop the program.

```
10 ?CHR$(147)
20 P$="GREEN DOOR"
30 ?"WHAT IS THE PASSWORD"
40 INPUT A$
50 IF A$=P$ THEN GOTO 80
60 ?"WRONG PASSWORD MATE"
70 STOP
80 ?"CORRECT PASSWORD"
90 ?:"WELCOME, FRIEND"
RUN
```



This password program will stop if you do not enter the correct word. Line 50 compares the input word A\$ with the previously set password P\$. IF they match THEN the program jumps to line 80. IF no match THEN the program continues at line 60 and the program stops in line 70 with the STOP command. This STOP command reports the line number the program has stopped at.

More next month.

ANSWERS: JULY 87.



## MULTIPLE ELEVATORS

Here's a neat little trick for the 64. Hope you like it

```
10 PRINT "[ shift CLR]"
20 POKE 220,234
30 PRINT "MULTIPLE ELEVATORS"
40 GOTO 30
```

PETER

NUMBER 3  
JOYSTICK!



## POKE CHEATS

### COMMANDO

10 POKE 14631,0  
 20 POKE 2456,69  
 30 SYS2128

### WHO DARES WINS

10 POKE5748,255  
 20 POKE5569,255  
 30 SYS16384

### GHOSTBUSTERS

10 POKE34777,155:REM (GRAPH)  
 20 POKE34443,234:POKE34443,234:REM (ENERGY)  
 30 POKE34351,153:REM (BACKPACK ENERGY)  
 40 POKE29184,159  
 50 POKE28185,3  
 60 POKE32425,159:REM (MEN)  
 70 POKE38454,98:REM (MONEY)  
 80 SYS24576



### GYROSCOPE

10 POKE46687,76  
 20 POKE46688,105  
 30 POKE46689,182  
 40 SYS2067



### TIPS OLLIESFOLLI

TYPE NORBI TO JUMP  
 TO LEVEL 15

TYPE ZOOM TO JUMP  
 TO LEVEL 19



BY PETER T.L.C.U.G.

On having my birthday this month, (age not given,) I received as a present from my wife, a programme, namely, "THE TOY SHOP". A programme I think will be around for a long time to come.

The programme will really show you what your COMMODORE computer will do.

There are twenty designs to choose from and after printing a chosen model, you glue the designs on pre pasted cardboard, cut out and put together. They really work. Yes, working models, the programme is easy to operate menu driven.

All excited I could not wait to set the printer going, but alas!! not to be, for I was soon to realise that my printer which is a MPS1000 Epson convert for Commodore, was not compatible with the programme. All circles were out of round, egg shape etc. After trying several printer setups and many disappointments later I decided I needed "HELP".

After ringing Commodore Sydney, I was advised to phone the distributor, which is Imagineering.

So back to the phone, only to be told something that I already knew, that The Toy Shop, would not work with my particular kind of printer, and for me to ring Epson. (Lots of help).

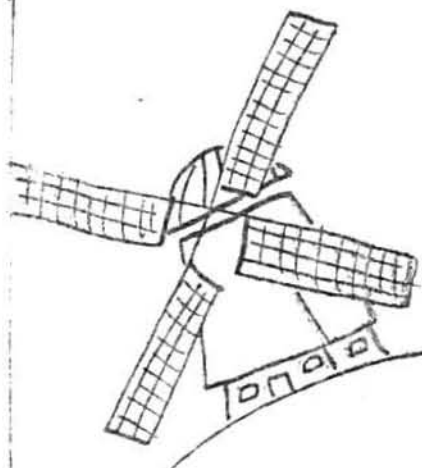
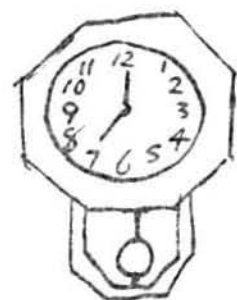
Rang Epson Printers head office, only to be told, nothing could be done and as the printer was made for Commodore to ring them again.

After feeling I was getting the run around, I decided to ring COMPUTERSCOPE at HORNSBY, where the programme was bought from in the first place. I found the staff most helpful and after leaving the printer with them for a day, they fitted a Graphix Interface and had "The Toy Shop" printing perfectly.

I would like to thank COMPUTERSCOPE at Hornsby for their friendly, helpful service and recommend their advice and service.

PETER

T.L.C.U.G.



## GOSCOM MINUTES

-----

DATE: JULY (GENERAL MEETING)

VENUE: NIAGARA PARK PUBLIC SCHOOL.

### GENERAL BUSINESS:

-----

#### 1. SOFTWARE LIBRARY:

Goscom public domain software has been updated and can be copied at meetings for the cost of;

: \$1.00 with your own disk.

: \$2.80 with disk supplied.

: or...swap, your new public domain software for your choice of Goscom's.

#### 2. BODYLINK:

Bodylink (a link with your body and your computer to check your state of health), will be demonstrated at the AUGUST meeting. Third Wednesday. John from Professional Filing Systems has been good enough to organise it for us.

#### 3. CLUB MODEM:

It was decided that members wishing to try out telecommunications for the first time could take turns in using the club's modem, using a roster system. Anyone wishing to be placed on the roster, see Karen.

4. 16 BIT NUGGETS will bring along his A1000 if the Bodylink demo falls through.

AUSTRALIAN COMMODORE REVIEW have offered us a deal stating; if Goscom buy from them 15 copies per month at the added cost of 50 cents per copy, they will in return give us a full page advertisement in A.C.R. It was decided in the positive

6. AMIGA (or A.S.I.G. (AMIGA SPECIAL INTEREST GROUP)) begin meeting 14th AUGUST at THE OLD PRIMARY SCHOOL at WYONG. All visitors welcome, you don't have to be an AMIGO. FRESH FISH disks, John West selects the disks the others reject !!

#### 7. NEW MODEM

Warren Mason is selling a new modem incorporating 75/1200 and 1200/75 bauds. Check with Nuggets for details.

#### 8. SECOND MEETING:

It was agreed that a second meeting was required in order to cater for members required.

#### 9. TREASURER'S REPORT:

BALANCE OF ACCOUNT : \$473.00 + \$37.00 SHOP FLOAT.

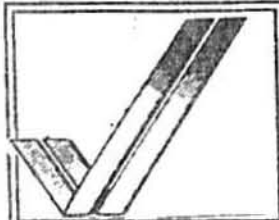
OUTSTANDING to GOSSY: \$201.00

OUTSTANDING ACC/ : \$ 50.00

Neil also promises a demo of TELEBANK incorporating Goscom's accounts. Also Spreadsheet profile at SEPTEMBER MEETING.

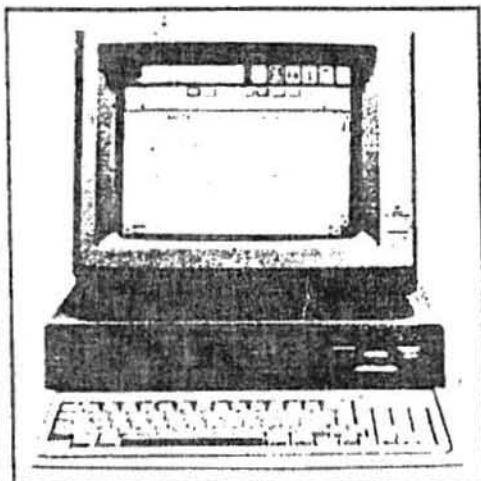
END





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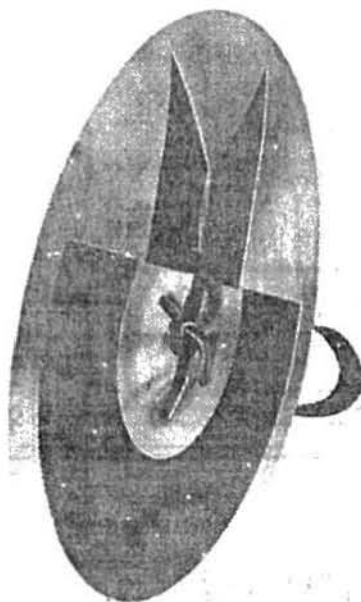
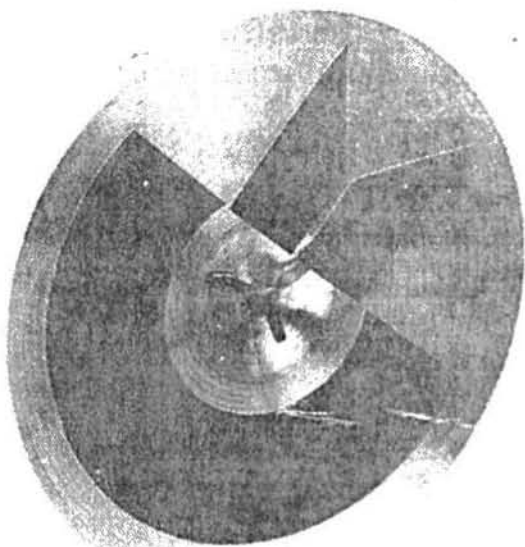
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